Towards Community Planning for an Aging Society

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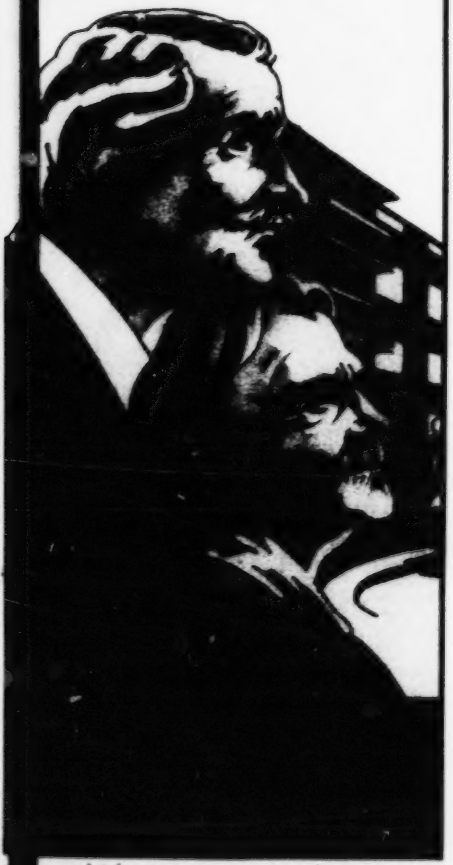
1 Introduction



The seniors' population in Ontario, those over 65 years of age, will practically double in size by 2001 and double again over the following thirty years, Figure 1. The impact of these changes will be felt throughout the whole population, particularly as the age composition of communities shifts.

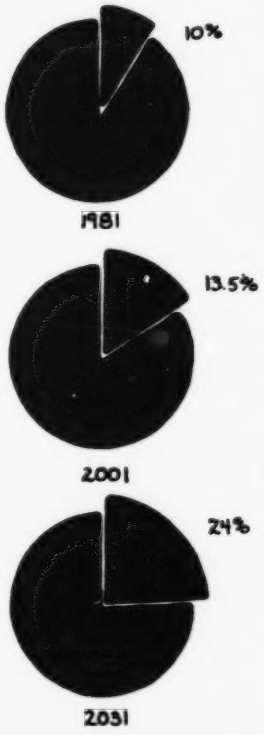


Figure 1 A growing proportion of seniors (65+) in Ontario's population.

In real figures the "Seniors' Boom" means both absolute and proportionate growth. Planning for these demographic shifts needs an extended time-frame and the community planner should now be considering the long term future: twenty to fifty years ahead. Five or ten year horizons, common in planning practice today, may not allow sufficient time to plan for what will be needed. In this report the demographic forecasts go as far as 2031. The target planning horizon is much nearer, around the 2001 mark.

However, planning twenty years in advance has its drawbacks: uncertainty of forecasts, lack of information regarding future employment, technological advances, the state of the economy, and so on. This report, or overview, admittingly has many rough edges. It is bold in its assumptions and "professional judgements", limited to the future impact of aging on **urban** areas, incomplete with regard to cost/benefits and creative in the solutions proposed. The report does not represent future government policies or programs, or changes to the existing ones. The report's purpose is to stimulate and challenge community planners to consider this important issue of demographic change in their daily work.

The term senior, itself, has various meanings, but in this report it means those people 65 years or older. Clearly, such a definition may be problematic, since many people 65 or older act much younger and many younger people may have patterns, behaviour and needs similar to much older people.

The report does not advocate planning for seniors in isolation, but rather, it emphasizes the importance of examining seniors' needs and relating their needs to planning for the general population. The first step is to identify seniors' problems and needs. The next is to find appropriate solutions and the third step is to integrate them in with the rest of society's needs, recognizing where they differ or demand separate solutions, and evaluating whether or not they should be provided for at all. In other words, the aging population is only one of many considerations in community planning.

The understanding that good planning for seniors is good planning for the whole population is an essential premise for a study of this kind.

The topic of needs is an important one when planning for an aging population because up until now seniors have not been vocal about their needs. Their specific needs have not been explored and this is particularly true at the municipal planning level. This study shows what distinctive requirements planners might consider in the preparation of long-term (and short-term) planning documents for urban areas, as well as the evaluation of development proposals.

As the population ages, planners will be confronted with the need to make decisions regarding seniors in four main areas:

- the physical form and social composition of the neighbourhood;
- the demand for transportation throughout the community;
- the ways health and social services are delivered at the local level; and
- the demand for certain housing types and locations.

The response to these issues by municipal planners will vary and will depend, of course, on the specific circumstances of each individual community and other societal changes which take place.

A wide range of solutions are suggested in this report which may assist planners in planning for an aging society. These fall into three main areas:

- land use;
- transportation; and
- urban design.

Within each of these general areas, key concepts have been identified and a number of solutions planners might consider are discussed.

In the land use area, four concepts have particular importance for future planning:

- densification/intensification of land uses;
- introduction of mixed uses at the neighbourhood level;
- creation of neighbourhood centres, and
- improvement of housing mix and flexibility.

Similarly, urban design improvements for seniors offer significant scope for creative action in the following areas:

- connected/converted buildings;
- common land;
- urban corners;
- therapeutic parks; and
- pedestrian environment.

Finally, seniors' transportation concerns are inextricably tied to land use planning, and ways to improve mobility for seniors can offer new challenges for planners.

The parts of the report concerned with the transportation needs of seniors were prepared by the University of Toronto/York University Joint Program in Transportation.

A discussion of the potential solutions is preceded by chapters setting out the main seniors' demographic and socio-economic trends for planners to consider over the next twenty or so years and highlighting the community planning issues resulting from such changes. The Appendix of the report contains a case study demonstrating how the concepts might be applied.

2 Ontario's Seniors: Today and in the Future

Before tackling community planning issues related directly to the needs of seniors, one should have a reasonable understanding of who seniors are today, and in what way they may change over the next twenty to fifty years. A common misconception is that seniors are a relatively small and homogeneous group. While that may have been more true in the past, today's seniors are a heterogeneous group and will become even more diverse in the future. Their numbers have grown steadily over the last twenty years and when the "baby-boom" generation reaches 65, their ranks will swell impressively.

Table 1 Ontario's Seniors

1961	508,000
1971	644,000
1976	738,920
1981	868,200

Source: Census of Canada, 1961, 71, 76, 81

2.1 Today's Seniors

Presently, seniors represent about ten percent of Ontario's population (1981 Census). Since 1976, the seniors' population has grown by 129,000 persons, an increase of one percent (Table 1).

Most seniors are in the so-called "young-old" age group, 65-74, although the number and proportion of seniors over 85 years is steadily increasing. Another important dimension of the "aging of the aged" is that there are more senior women than men in the 65 and over population, with only seven men for every ten women, Figure 2. This is considerably lower than the ratio for Ontario's population as a whole, which has nine men for every ten women. The ratio, however, decreases as the population ages even over 65. There are more than twice as many women as men over 85 years of age (Table 2).

Information on marital status is given in Table 3. It is clear from this table that the proportion of married people drops dramatically as age increases. This is significant when one considers that about 23 percent of all seniors live on their own. There is also about three times the number of women living alone compared to men.

Figure 2 Older women outnumber older men.

Very few seniors (9 percent), however, are resident in institutional settings, such as chronic care hospitals, or nursing homes (Table 4). Of the 91 percent of seniors living in the community:

- 67 percent are homeowners; and
- 33 percent are renters (9 percent of these receive some governmental assistance).*

Reliable health and income data for seniors are more difficult to obtain. Both are important factors in determining housing requirements and level of mobility. A Ministry of Health Study,** however, indicates that 67 percent of seniors are independent, that is, they are able to look after their own needs. Those who have some difficulty with, for example, food shopping, account for 27 percent of seniors. A final 6 percent has great difficulty caring for themselves and their own needs.

According to a Ministry of Treasury and Economics study,*** 12 percent of the population over 65 years of age has income from employment. Income data from all sources are provided in Table 5. These data clearly show that seniors' incomes today are far lower than that of the general population, and vary by sex as well.

Changes in age composition do not occur uniformly across the Province. Some counties, such as Grey, Haliburton, Muskoka and Victoria, presently have 14 percent or more of their populations in the oldest age groups. In contrast, northern counties and districts or southern counties with large suburban areas adjacent to large metropolitan centres, like Halton and Peel, have the lowest proportion of seniors in their population.****

Despite the fact that 78 percent of today's seniors live in urban areas, certain areas are experiencing an aging of their populations much earlier than elsewhere in the Province. This is particularly true in some smaller towns in agricultural areas, such as Napanee or Ailsa Craig, where 18 and 24 percent of the population, respectively, are over 65 years of age today.

Table 2 Seniors' Marital Status

Sex	65-74	75-84	85+	Total
Female	289,400	168,200	61,800	506,300
% of Elderly	56	62	71	58
Male	241,800	98,800	25,200	364,800
% of Elderly	44	38	29	42
Total	536,400	269,000	72,700	868,100
Total %	100	100	100	100

Source: Census of Canada, 1981

Table 3 Ontario Seniors: Age and Sex, 1981

Age	% Married	% Not Married*
65-74	62	38
75-84	40	60
85+	18	82
All 65+	52	48

*Not married includes never married, divorced, separated, and widowed individuals

Source: Census of Canada, 1976

Table 4 Seniors' Living Arrangements, 1976

	% Male	% Female	Total
Economic Family**	71.0	40.0	53.0
Other Family	10.0	8.5	15.0
Alone	12.0	31.5	23.0
Collective	7.0	10.0	9.0
Total	100.0	100.0	100.0

** 'Economic Family' defined as two or more people living together through marriage, etc.

'Other Family' included people living with economic families of which they are not a member, or sharing with non-family members.

'Collective' includes homes, nursing homes, etc.

Source: Statistics Canada, 1976 Census

Table 5 Individual Median Income of Seniors, 1977

Age	Female	Male

* Census of Canada, 1981.

** Ministry of Health, *Directions in Public Health*. 1980.

*** Ministry of Treasury and Economics, *Issues in Pension Policy*. 1979.

**** J.M. Gross and C. Schwenger, *Health Care Costs for the Elderly in Ontario: 1976-2026*. The Economic Council of Ontario, Occasional Paper 11, 1981.

2.2 Demographic Projections

There are numerous forecasts available concerning the future population of seniors, although these forecasts usually are categorized by age and sex only and provide little or no statistical information regarding employment, income, living arrangements and transportation.

Figure 3 shows forecasts for the three seniors' age groups through to the year 2031. The number of "young-old" (ages 65-74) will increase at an extremely high rate, one which will be greater than that for the general population. It will jump sharply after 2011, as the baby boom ages.

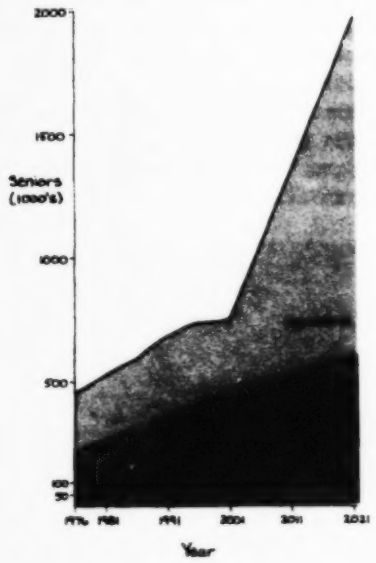


Figure 3 The "young-old" (65-74 years) will increase in number at a high rate from 1991 on.

Other Statistics Canada data on male/female ratios point to the rising proportion of women in the elderly population. Figure 4 shows two age/sex pyramids: one for 1981 and one for 2021. There are more females than males in the older categories, but approximately the same mix in the 65-74 age group. The significance of these figures is that a large number of single person elderly households are likely to result from the differences in survival rates between the sexes.

Indices of growth have been developed for non-married people over age 65.* In Ontario, using 1971 as a base of 100, the index will grow to 109 by 2001 and to 348 by 2021, indicating the potential for a greatly increased number of older single person households.

* Stone, L.O. and S. Fletcher, *A Profile of Canada's Older Population*. Montreal: Institute for Research on Public Policy, 1980.

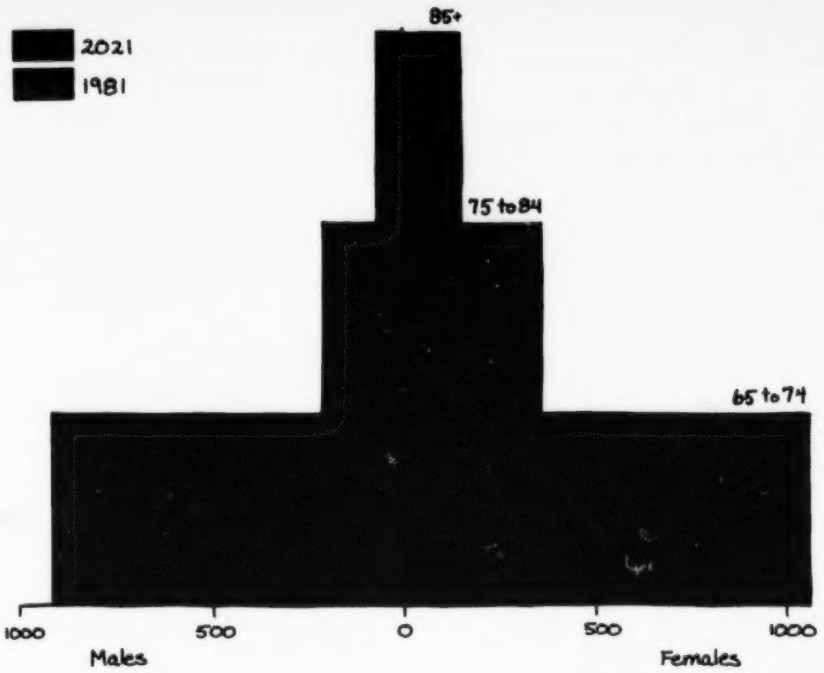


Figure 4 The proportion of women in the seniors' population grows as age increases.

Similar indices have been prepared on non-family households (living alone, sharing, institutionalized) with heads older than age 65 (Table 6). Again using 1971 as a base of 100, the figure will change to 417 for men and 490 for women by 2021. Together, these indices show that there will be a great many more non-family households headed by elderly people in the future and that many of these will be single person.

As a result, seniors will be more independent in their living arrangements. With trends toward fewer nuclear families today, the seniors of the future will also depend less on their children and attempt to be more self-reliant in their activities. Today's independent woman can be expected to continue their independence as seniors. High divorce rates today may also lead to fewer married elderly. Finally, since many of today's couples do not have children, they will have no one to depend on in their old age.

Table 6 Growth Index for Non-Family Households with heads 65+, Ontario

Year	Male
1971	100

2.3 Other Trends

With regard to income, health, education, recreation and transportation needs, there are few statistically-based forecasts available. Nevertheless, demographers, economists and social scientists have been attempting to determine trends for seniors and this study reports those findings most relevant to community planners and their work.

Income: Future seniors will probably be more affluent due to a larger proportion of people in the work-force today. The mandatory retirement age has been raised recently in the United States from 65 to 70 years of age. The ability to retire in most cases, however, is directly related to income and there is some evidence to suggest that the future work-force, those 15 to 64 years of age, will be hard pressed to support tomorrow's large seniors' population. Opinions on the topic of pensions also vary widely. There are some suggestions that pension funds will be inadequate in the future and thus eliminated, or that the greater the affluence of seniors might reduce the need for pensions.

In the future, if a more flexible approach to work takes hold, such as job sharing and part-time work, and if the certainty of a secure and satisfactory pension diminishes, seniors may continue their careers well beyond 65 or 70 years or may switch to a new career, Figure 5. Even today, economists believe there is a significant underground economy at work where seniors (and others) supplement their income with unreported earnings from work as babysitters, handymen and so on.*

will have implications in a number of areas:

- there will be more need for transportation of all types and seniors will no longer be regarded as primarily off-peak transit users;
- housing location in relation to workplace will continue to be important for seniors; and
- there may be less demand for social facilities, such as today's traditional seniors' clubs.

However, there is the feeling that seniors will be able to take advantage of pension improvements and will, in general, be more affluent than today. Once again, it should be remembered that seniors are heterogeneous, and while some may indeed be more affluent than today's seniors, there will also be some groups still disadvantaged. Single senior women may still fall into this category in the future. Women are primarily employed today in low-paying jobs where a pension is not part of the benefits package.** Housewives have only been able to contribute to the Canada Pension Plan since 1980. When these women reach retirement they may well need assistance with shelter costs and other basic items.

There is also the problem of disrupted work patterns among both sexes, but particularly women. The problem of how this affects pensions must be resolved. Thus, many people will have to contend with the continuing problems of a fixed income and probable increasing shelter, transportation and food costs. This becomes vitally important if one considers that some seniors may be "retired" for almost a quarter of their life.

Health: Seniors will be healthier as a group, Figure 6. This assumption is based on historically increasing survival rates. Such a conclusion must be viewed with caution, however, as many medical people believe that there is an upper limit on lifespan, although people may be healthier as they approach this limit.

Some of today's chronic ailments affecting the elderly may no longer take the same toll and seniors will remain healthier and more active longer. In fact, this may mean not only that more people will live independently to an older age, but also that there will be a sustained and growing demand for health care at the end of the life cycle as the "aged age".*** This has important implications for public expenditures with the high cost of health care required by the very old. To accentuate this further, the population in the "old-old" group (75 years or older) is anticipated to grow by 120 percent between 1976 and 2001, and by a further 82 percent to 2031.

Figure 6 Conventional sports and fitness will play a key part in future seniors' lives.

Figure 5 Many seniors will continue to work.

* Science Council of Canada, *Perceptions 2.* Ottawa: Information Canada, 1976.

** Ontario Status of Women Council, *Women and Aging.* 1981.

*** Gross and Schwenger, *Health Care Costs for the Elderly in Ontario: 1976-2026.* Ontario Economic Council, 1981.

Education: Seniors will be more educated and have broader interests. This will have significant implications for their work-force participation desires and even socialization needs.

Seniors will probably also be more politically active. They will expect the community where they live to be responsive to their needs.

Recreation: Although some seniors will continue to work, generally the 65+ years will mean freedom, choice and options.* Seniors will have a diverse range of recreational needs, encompassing fitness, the arts, sports, socializing and so forth, Figure 7. Recreation will be a more integral part of their lives and they will place demands on all recreational facilities and services in the community. The programming in seniors' centres, and perhaps the facilities themselves, may require modification to meet the sophisticated array of needs of this group of seniors. The location of seniors' centres may also require change.

Figure 7 Seniors will enjoy a variety of recreational options.

* Government of Canada, *Canadian Governmental Report on Aging.* Dept. of National Health and Welfare. Ottawa. June, 1982.

Seven different transportation lifestyle groups have been developed to explain seniors transportation behaviour.

A Independent, Own Auto	**– seniors who have the financial and physical ability to drive their own auto and to live alone; – most freely mobile of seniors.**
B Dependent, Access to Auto	**– seniors who live with others (usually for financial reasons who own an auto; – mobility curtailed.**
C Independent, No Auto	**– seniors who have the financial resources to live independently and may or may not be able to afford a variety of transportation alternatives, such as car rental, taxis, buses, etc.**
D Dependent, No Access to Auto	**– seniors who live with others and who have no auto access; – severe mobility constraints.**
E Sheltered or Group Housing	**– seniors who have some degree of financial or physical dependence; – refers to those living in a collective seniors housing arrangement, such as an apartment building or hostel; – a range of transportation needs which can be economically met because of the group setting.**
F Disabled	**– seniors with a physical disability and who will appear at all income levels and in a variety of housing circumstances; – require special transit, but needs similar to those of all disabled in population.**
G Institutionalized	**– seniors with severe health problems who reside in a nursing home, hospital or similar facility; – not able to care for own needs. Least requirement for mobility of all seniors.**

Transportation: Little research has been conducted exclusively on the transportation needs and behaviour of seniors, especially in the Canadian or Ontario context. For this report, a categorization of the seniors' population was developed to help identify present and future transportation needs, since transportation is a vital component of community planning.

The seniors' population was broken down into seven lifestyle groups. Each grouping has specific transportation needs

Table 7 Relative Proportions (%) of Each Lifestyle Group 2021

	1981	2021		
Groups		Optimistic	Pessimistic	Public Intervention
A Independent With Auto	20	35	10	10
B Dependent With Auto Access	40	15	10	10
C Independent With No Auto	10	5	10	10
D Dependent With No Auto	5	5	10	5
E Sheltered And Group Housing	10	20	40	40
F Handicapped	5	5	5	5
G Institutionalized	10	15	15	20

or problems.

Within each of these categories, there are, of course, a range of circumstances and one might also need to examine the following factors: level of physical disability, level of income, employment and geographic location, to obtain an adequate understanding of seniors' transportation issues in any one municipality.

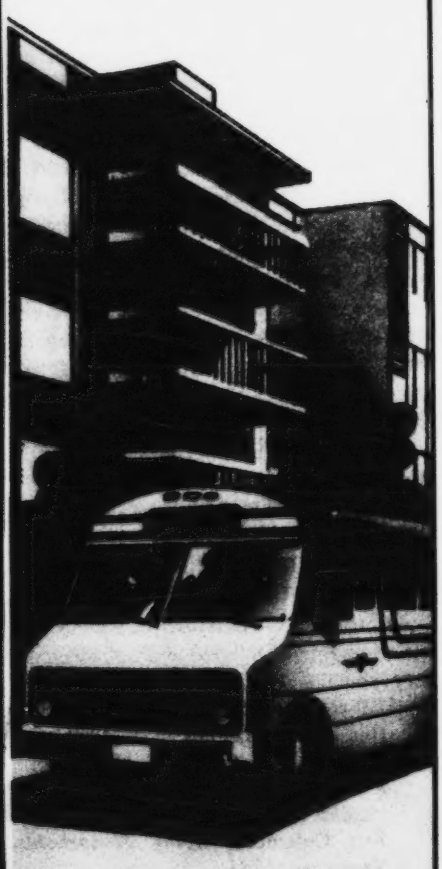
Based on professional judgement and transportation research conducted in the United States, the present distribution of seniors in these lifestyle groups was determined. Then, subject to some speculation about the future, three alternative forecasts were made, respecting changes to these groups in the future. An arbitrary target date of 2021 was selected.

At the present time most seniors either own their own auto or live in households with access to an auto. The optimistic scenario describes what would happen if all current trends were to continue unchecked and if no major economic changes were to occur in society. Given these assumptions, Table 7 indicates that more seniors would be independent in terms of living arrangements and that a larger proportion of independent seniors would be auto owners. The other major change occurs in the increase of seniors in institutions or sheltered housing, indicating both the need for, and the opportunity to develop appropriate forms of group transit.

In the pessimistic scenario, petroleum would be a scarce resource, and automobile use in any form would be largely curtailed. Referring to Table 7, nearly 55 percent of the elderly would be living in institutional and sheltered housing under this scenario. It should be noted that in 2021 this will represent more seniors than all elderly in the 1981 population. There would also be an increase in the percentage of private households who would not have auto access. The changes in society that take place under the public intervention scenario would be similar to the pessimistic scenario, except that 65 percent of the elderly population would be in institutions, sheltered or group housing. This would allow for the more efficient provision of transit to those in need.

As set out above, there potentially will be many ramifications from the aging of the population. The difficulty that community planners will face will be to identify those issues or problems which planners can address in the context of their work. In the following chapter, the growth of, and the changes in the seniors' population are examined to clarify the specific implications for community planners.

3 Community Planning Issues in an Aging Society



The impact of an aging population will be widespread. The substantial rise in the number of seniors will increase the diverse character of society and planners no longer will be mainly concerned with planning for a family-oriented population. Planning practice will need to consider a more heterogeneous population which expresses different needs in terms of community life and community activities at each stage in the life cycle.

This heterogeneity points to the need to adapt and/or replan certain community facilities and services. The closure of elementary schools today already indicates how some facilities may be physically sound but functionally obsolete because they serve only one age segment of the population.

The increasing importance of seniors points also to the need for a broad basis on which to make land use decisions. Conventional standards may become outmoded, such as neighbourhood designs based on the size of population required to serve an elementary school. An evaluation may have to be done of facilities at different times in the community's history to account for changes in neighbourhood composition.

Zoning bylaws, for example, may restrict residential land uses unduly, particularly with respect to conversion of single family properties. More general planning standards may have to be devised to reflect the needs of particular groups in the population, seniors being one of them.

As previously mentioned, the aging of society is only one aspect of change which planners must try to address, and seniors are only one group in the population. Their individual needs are as widely varying as those of the rest of the population (Figure 8).

As stated earlier, sound planning for seniors is essentially sound planning for the entire population. Consequently, in looking at community planning practice from a seniors' vantage point and in attempting to address future concerns, planners must also consider other emerging trends that will affect planning decisions. For example, there will be limited public resources available to solve the future problems of seniors. Automatic redistribution of public resources, from the young to the old, cannot be assumed after 2001*.

In terms of energy consumption for heating/cooling and transportation purposes, conservation will be a key principle.

* Foot, D., "Population Aging in Ontario : Economic and Policy Issues", in B. Wigdor, *Housing for an Aging Population : Alternatives.* Conference Proceedings. University of Toronto Press, 1981.

Figure 8 Seniors' needs are similar to and as diverse as those of the rest of the population.

The concept of doing more with less will likely influence planners to consider more energy-efficient solutions for land use (such as, infilling, increased densities, mixed uses) and transportation problems.

Improvements in telecommunications will also impact the individual in a number of ways, but primarily in improving access to services, such as a medical alert system or public transit information.

Four main areas have been identified where the aging of the population will directly affect the community and hence, create new concerns and new opportunities for planners and others at the municipal level:

- ▶ neighbourhood form and composition;
- ▶ transportation needs and behaviour;
- ▶ health and social services facilities; and
- ▶ housing.

The issues associated with these areas are explored in this chapter and possible solutions are presented in the following chapter.

3.1 Neighbourhood Form and Composition

Today's neighbourhoods have developed with a family focus. The centre of the neighbourhood is most often the elementary school and the needs of the single person, the senior or the disabled, are seldom considered. Except in the oldest parts of Ontario's communities, residential neighbourhoods are uniform single use areas, with a strict separation of commercial, residential and other activities. This often results in long distances between home and shops or local facilities (such as the library). These access problems are made worse in newer suburban areas where densities are inclined to be the lowest in the urban area and the curvilinear street pattern is oriented to the auto and not to the pedestrian.

The senior is disadvantaged both by the separation of uses and by the distance to facilities and services. Once a person enters the "old-old" phase of the aging process, the sphere or horizon of his or her world begins to narrow significantly. Mobility becomes more difficult because of either cost or diminishing physical abilities, and familiar surroundings, as well as those shops and services closest by, will be depended upon to a greater degree.*

Housing types also tend to be quite uniform, namely single family, in most residential neighbourhoods. Zoning by-laws, in many instances, prohibit more innovative use of the existing housing stock. It is, for instance, not usually possible to add an apartment in a single family home occupied by one or two seniors to assist in meeting costs and to reduce loneliness.

3.2 Transportation

Transportation is an area which is strongly interconnected to other aspects of seniors' lives, such as health and personal mobility, housing, economic condition and so on. The transportation needs of seniors are very diverse and depend largely on the individual's personal situation. In general, all seniors need:

- ▶ a means to get to services and, if necessary, to work;
- ▶ special services, if physically disabled;
- ▶ a barrier-free, pleasant walking or cycling environment;
- ▶ public transport modes that may be used easily to travel to dispersed origins and destinations;
- ▶ reasonable fares on public transit; and
- ▶ appropriate destinations to visit.

In general, the needs of the elderly far exceed their current observed behaviour, although additional data and analysis would be useful in order to more concretely document this conclusion. The case can be made that some seniors, such as the institutionalized or the disabled, have almost no transportation needs, but the contrary is more likely the case. Therapeutically, the benefit gained from an outside trip may be immense, and if medically able, the person should be encouraged to make trips to shopping centres, relatives, friends, etc. This concept should be incorporated into planning for seniors.

Seven lifestyle groups of seniors related to transportation needs were identified in the previous chapter. In practical terms, the transportation solutions to these needs may be distilled into four modal groups: auto, conventional transit, special transit and walking. Physical ability (mobility), affordability, and location are some of the determinants of mode.

Auto: Independent seniors who own cars are able to take care of their own needs, but all the other groups rely on access to an auto or transit. Financial and physical constraints are the key limitations on automobile usage by seniors. Car ownership is a constantly increasing cost, so some trips may be made on foot or by transit, or possibly not at all. In addition, the economic prospect of purchasing a new car today is difficult for most seniors. Thus, as the person and car ages, members of this group may decide to use other modes. However, future technological breakthroughs such as a smaller urban car may make the auto more feasible for seniors.

Elderly people may not all have the psychological or physiological stamina to endure heavy traffic or long stretches of highway travel, and hence some trips may be made on other modes. Also, some auto trips may not be possible, due to medical problems such as night blindness.

Given these problems and the present economic constraints and trends, car rental may become more desirable than actual car ownership, particularly for short-term use by seniors who need to make special-purpose trips. This might translate into car rental lots being located in prime seniors locations or in central locations for the population in general (e.g. shopping centres).

Another impact associated with seniors' continued use or possible increased use of the private vehicle is that seniors-only facilities, including seniors' centres, will have a much greater impact on the surrounding areas than today, since it can be expected that more seniors would be arriving by car and thus parking would be required. Seniors-only apartment buildings currently are subject to lower parking standards in many municipalities. Problems can be anticipated here if auto ownership among seniors (at almost all income levels) grows. Planners and housing developers will have to be aware that certain accommodation may suit the needs of the "young-old" who are more likely to own cars, while others may be more suitable for the older senior.

Taxis (which are expensive) and shared taxis will probably continue to be used for some trips. If economic constraints continue, it is likely that some of those seniors who own and operate cars or take taxis might be forced to take conventional or special transit.

* V. Regnier and J. Gonda, "Aging Households : Environmental and Psychological Factors Associated with Choosing a Residential Vocation" in Centre for Human Settlements, University of British Columbia, *Aging Households.* Vancouver, 1981.

Conventional Transit: Conventional transit (usually bus) serves the needs of some seniors well, such as those without access to a car, but it also has many pitfalls. It has little potential for route flexibility or vehicle adaptation to the needs of seniors, especially if seniors are dispersed throughout a municipality. The conventional system is heavily subsidized at present and significant network expansion, especially in medium-sized and smaller urban areas is unlikely in the future. For those seniors who live away from the core area, radial routes to a downtown area may not take independent seniors to convenient shopping or medical locations. Many transfers may be necessary to visit friends. In addition, walking to bus stops in winter may be difficult even for healthy seniors, and waiting for buses in any weather can be onerous. The spatial distribution of the population is thus an issue, specifically the problem of the autoless population in the suburbs. The proportion of the population in this situation in the future could be as much as twenty-five percent of all elderly and six or more percent of the total population.

In group housing, many people with similar demands live together and probably have some common trip destinations (shopping, medical, etc.). They can be potentially served in a cost-effective manner by transit in ways that seniors living in dispersed locations cannot be. With continued economic constraints, more autoless people may, in fact, be living in group housing, so conventional transit would probably experience greater patronage. Under this scenario, more seniors would likely continue to work, thereby placing even greater demands on transit. This change highlights the importance of integrated land use and transportation planning. The location of transit stops, facilities and services will be critical for good accessibility.

To conclude, normal public transit can be an effective means of servicing the elderly, but its routing and timing inflexibility make it unsuitable for a portion of the seniors population. For those located off the main transit routes, night, winter, or any usage can be a problem, demanding other solutions. The disabled, in particular, have generally not been adequately served by conventional transit. It would be costly and impractical to make entire transit systems accessible to the disabled; however, paratransit services, or special transit, would appear to be a more appropriate and feasible solution.

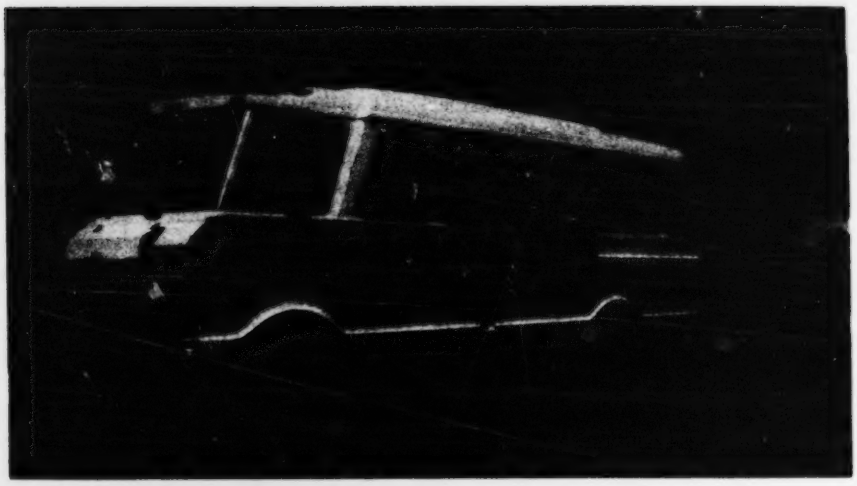


Figure 9 Special transit services are well suited to the needs of seniors.

Special Transit: Special transit consists of all public and private transit and paratransit services, other than fixed-route public transit. It has the ability to be tailored to specific user groups, trip purposes and destinations in ways that fixed route public transit cannot.

Thus, special transit is a mode of transportation well suited to the needs of seniors because it has the potential to offer door-to-door service at special times (Figure 9). It also offers the flexibility to overcome seniors' physical and psychological limitations. Just as in the case of conventional transit, the coordination and integration of special transit service planning and design with urban planning is a factor ensuring the successful implementation of the service. Special transit works best serving populations, like seniors, in higher densities. Once again, under tougher future economic conditions, more people may be living in group housing, which would help to lower the operating costs of this mode. The disabled must have adequate access to whatever form of transit they take.

Walking: The ease of walking for seniors and for the disabled, in particular, relates primarily to how well the physical aspects of urban designs have addressed the special needs of these groups (Figure 10). The suggested improvements fit the needs of society in general, but are slightly more pronounced for seniors, who have diminishing agility and sensory capabilities. Gradual grade changes, adequate lighting, brightly painted obstacles and well thought-out routing, through interesting and safe areas, are some of the requirements for the enhancement of seniors' mobility.

Walking would be a viable means of personal mobility for seniors if services and other attractions were located nearby and if the trip route was thoughtfully planned (where possible) to eliminate barriers and to enhance walking ease. Therefore, seniors' walking mobility, like the other modes, could be improved through appropriate and thoughtful land use planning.

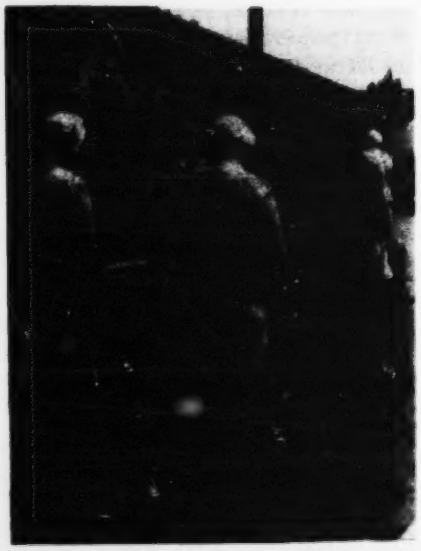


Figure 10 Seniors' will walk to obtain services if barriers are removed.

3.3 Health and Social Service Facilities

The trend today is to heighten opportunities for seniors to remain as self-sufficient as possible in their own homes, instead of in institutions.

Seniors presently have the highest per capita rate of expenditure in the entire population for health services. Canada has one of the highest levels of institutionalization of its seniors' population in the western world – about ten percent. In Ontario, the level is slightly lower, about nine percent.*

Currently, there are moves in the direction of preventative medicine and toward home care alternatives. An understanding of the diseases of old age is growing and seniors are being encouraged to remain independent and self-sufficient for a much longer time.

Although the range of home support services available to seniors is quite broad, not all services are available in every municipality. It is unlikely from a strictly financial point of view, however, that home-support services would be available to all in the future. Some form of centralized service provision, perhaps at the neighbourhood level, will probably be needed.

Given the likely changes in the composition of the seniors' population, more diverse health and social service packages will probably be required. Continuing education, nutrition counselling and physical fitness, for example, will play a major role in the service delivery function.

Meals-on-Wheels is a well publicized and popular home care program which, in communities across the Province, provides meals to shut-ins, the disabled and the ill. Given the previous assumption, meals-on-wheels might become "wheels-to-meals". In this case, a central neighbourhood location would be selected where meals would be provided and those seniors who could not get there on their own would be picked up and driven to the central place. Thus, conventional health and social services are being reassessed and a variety of new initiatives are being tried to develop less expensive support systems.

The direction of these services may branch out in two ways:

- there will probably be more home support for those needing assistance in maintaining their property and in running their household; and
- home support will be very costly so there will be a parallel need for a more centralized way of delivering many services to seniors who are capable of moving about their own neighbourhood or community. Volunteers will also make a significant contribution and will lessen the impact of rising costs.

All these factors mean that the role of existing community facilities may need to change as the composition of the user population and the neighbourhood changes. Particularly in the conventional suburban context, the separation of land uses and the standard fixed route transit system work against the efficient economical provision of home-support services or the small-scale centralization of some services. The low density character of most suburbs means that door-to-door visits will be costly. At the same time, the high cost of conventional transit makes it difficult, if not financially impractical, to provide this form of transit service to small-scale centralized facilities in suburban neighbourhoods.

* Ontario Task Force on Aging, *The Elderly in Ontario : An Agenda for the 80's.* Secretariat for Social Development, December, 1981.

3.4 Housing

The concerns regarding housing are closely related to each of the issues identified above. Seniors today have limited choice in terms of the housing opportunities available to them all (Figure 11). The two broad categories of choice are **full independence** which might involve ownership, private rental or assisted rental of a dwelling, or **full care** (institutionalization) in a nursing home, home for the aged or chronic care hospital. There are many options in between, which have not yet been fully explored or implemented.

As a group, tomorrow's seniors will have moved residence more often during their lifetime. Changes in residence to reflect different needs at different stages of the life cycle may become more popular. This will then heighten the demand for smaller household units as the population ages.

Figure 11 Many seniors continue to live in single family housing.

One approach to housing seniors has been pioneered by the private sector. This is the integrated housing facility which offers in one complex (Figure 12):

- independent apartments;
- congregate housing – individual units where meals, nursing and/or housekeeping services can be provided; and
- full and partial health care arrangements.

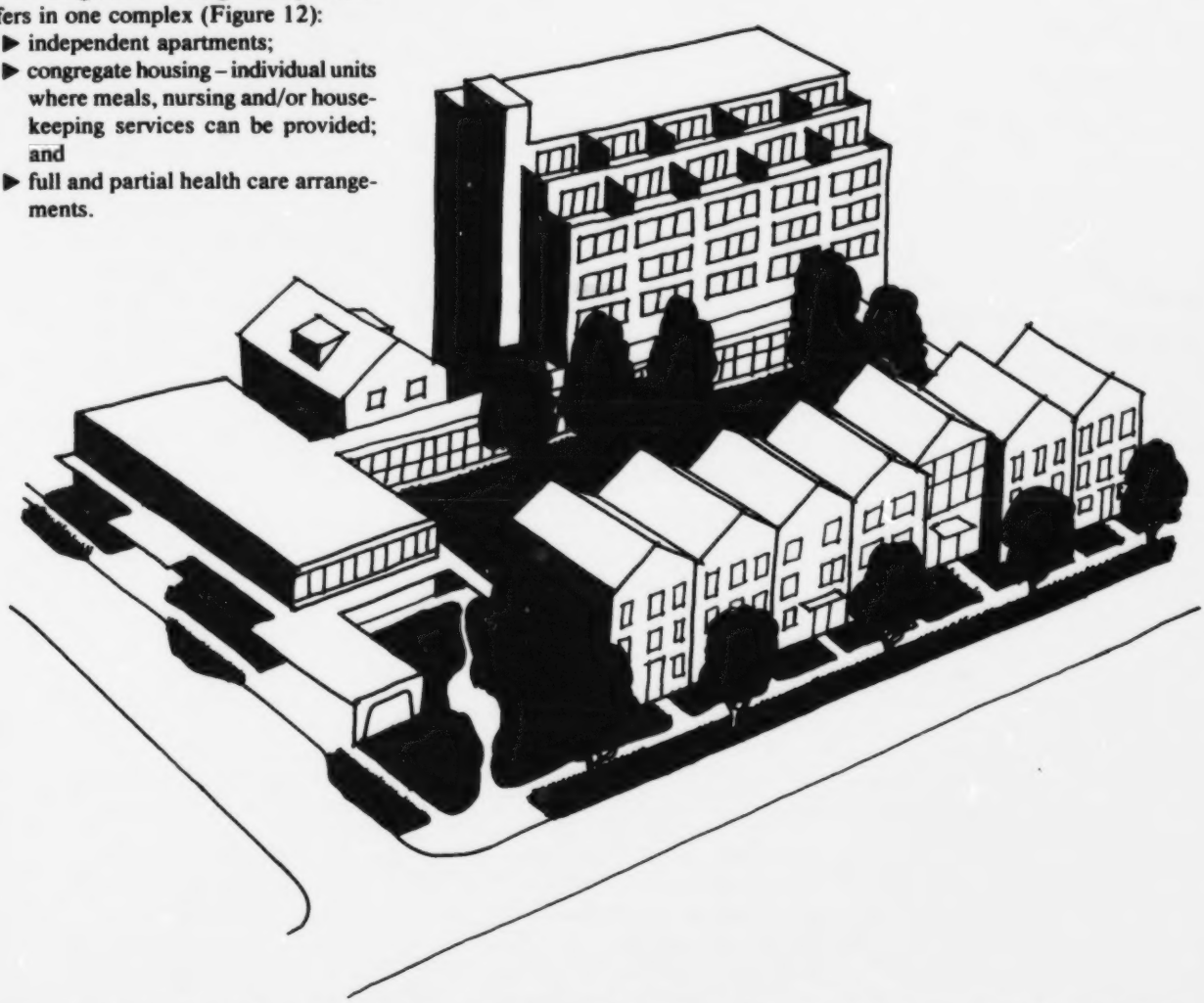


Figure 12 An integrated housing project for seniors provides independent apartments, apartments with some services and rooms with full health services.

Both the condominium apartment and the rural retirement village are other examples where the development industry has begun to respond to demand in the housing sector. Independent congregate housing projects, as described in Figure 13, are also being experimented with in some centres.

The number of independent households headed by seniors is on the increase and trends indicate that most seniors will continue to live independently for as long as possible. However, seniors who wish to stay in their own familiar neighbourhood usually have a limited range of housing to choose from. They may be "forced" to stay in a single family home, for example, even though it may be too large for their needs at this stage in their life cycle and they may not be able to afford up-keep or to physically handle the maintenance.

Such persons are considered "house-rich" but "cash-poor" and new solutions are required to meet the needs of the many seniors in this situation.

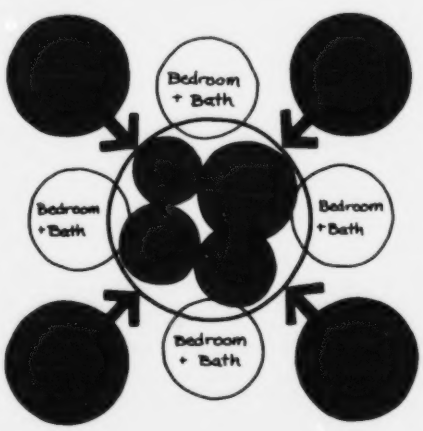


Figure 13 An example of the services which can be shared in a congregate housing situation.

It should also be remembered that despite the increased acceptability of changes in residence at new stages in one's life cycle, unplanned moves to unfamiliar surroundings because of declining health or a change in financial circumstances may be accompanied by severe psychological trauma in the elderly.*

Most community planners have not yet had to respond directly to the needs of seniors, except for the provision of senior citizens housing. These first three chapters have identified the nature of the changes which are going to take place and the ensuing planning issues. In the final chapter, responses to these changes are suggested.

* Victor Regnier and Judith Gonda, "Aging Households : Environmental and Psychological Factors Associated with Choosing a Residential Location", Vancouver, 1981.

4 Community Planning Response to an Aging Society

While chapter three identified the issues facing planners regarding the aging population, this chapter offers potential solutions to address the increased numbers, needs and issues related to an aging population. The discussion is divided into the three areas which will be most heavily impacted and where solutions will be instrumental in coping with an aging population: land use, transportation and urban design.

4.1 Land Use

This section examines the following four planning concepts:

- **densification and intensification;**
- **neighbourhood mixed use;**
- **neighbourhood centre; and**
- **housing mix and flexibility.**

The importance of these planning concepts and how the anticipated societal changes will affect them are explained below. The rationale behind the changes is given and finally, a number of ways these concepts might be put into practice are discussed.

4.1.1 Densification and Intensification

Concept

Increase the population and housing unit density in existing neighbourhoods, particularly in suburban areas, and intensify the use of land by other activities, such as commercial and institutional uses.

Rationale

Higher population densities would allow for better, more economical provision of home-support services, as well as the establishment of multi-functional neighbourhood centres. This is particularly important for existing low density suburban areas, which will house a variety of generations. In addition to home-support services, improved public transit service becomes feasible. Greater pedestrian access to neighbourhood services and shops also becomes possible if the population density is high enough to support wider distribution of such services.

A goal of providing a wider range of housing choices also becomes achievable as densities rise and new construction is integrated into the older neighbourhood fabric.

Both principles work together to unite scattered or widely separated uses and to encourage the integration of mixed use activities and opportunities to develop a real neighbourhood focus.

Personal security can also be improved if there are more people living in and using neighbourhood facilities.

For seniors, of course, all of these factors can work to extend their community life and lengthen the time they can remain self-sufficent.

Implementation

There are many ways intensification/densification can be achieved. New construction could take place either on undeveloped land parcels or as infill within existing development. New construction (if the location and site are suitable) could also incorporate a variety of uses, such as commercial, institutional and recreation. The official plan and zoning by-law would need to provide for the realization of this potential.

Rehabilitation and conversion of existing building stock would provide opportunities to create new dwelling units or expand commercial space. Rehabilitation is most often undertaken by the homeowner. Conversions are also primarily a homeowner activity, but would require in many municipalities less stringent zoning to permit conversions for multi-residential or commercial use to take place.

Shopping centres, in particular, afford a unique opportunity in the future to diversify their role and to utilize land more efficiently (Figure 14). The commercial functions could be expanded to include municipal activities/services, recreational space, office space, health care and so on. The parking lots, a rich land resource, could provide space for housing (especially for seniors) and for the extension of retail activities to provide physical connections with adjacent uses (Figure 15). Such change would require the agreement of shopping centre owners, as well as increased economic pressure to utilize the land more efficiently and changing attitudes on the part of the consumer regarding the role of the shopping centre.

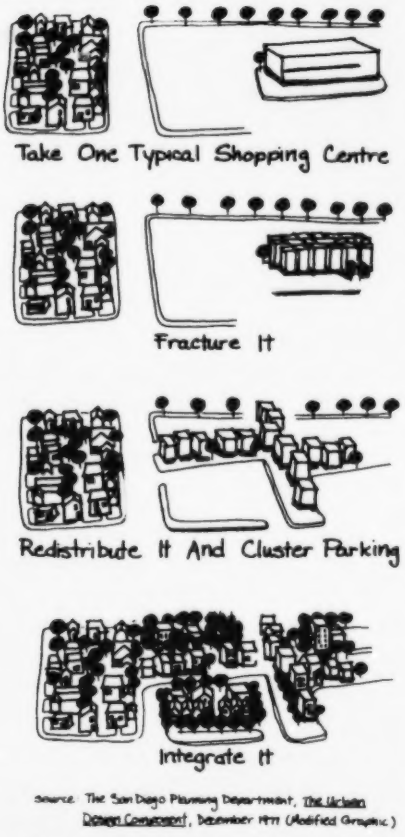


Figure 14 Shopping centres can be integrated into the community.

4.1.2 Neighbourhood Mixed-Use

Concept

Introduce new uses into a residential neighbourhood, including commercial, institutional or even light industrial activities. This may result in mixed-use buildings or simply different uses on lots next to one another.

Rationale

Similar to the thinking on densification/intensification, mixed-uses would bring services, shops and perhaps even employment opportunities closer to seniors. It would reduce the isolation that can occur when a senior becomes less physically mobile. Interaction with others is encouraged, while dependence on public transit or family is lessened. Opportunities for a neighbourhood life suiting the needs of a variety of age groups are opened.

Implementation

Mixed-use can be introduced at the neighbourhood level in two main ways. In both instances compatibility with existing/proposed uses in the neighbourhood would have to be considered by the planner. In the first situation, the corner store (Figure 16) or commercial activities in a new apartment building could occur in a neighbourhood without significant impacts. These might require, nevertheless, a change to the zoning by-law.

In the other case, the conversion of schools into mixed-use facilities with a commercial or residential component, or the creation of a shopping street in a residential area would be another possibility. In this last case, changes to the official plan and zoning by-law would likely be needed. School boards, in particular, might find this an attractive avenue to follow when faced with the possibility of closing a facility altogether.

Another potential opportunity for mixed use would be under-utilized industrial areas bordering residential neighbourhoods. There, residential, recreational and commercial activities could be allowed to take place in certain instances.

Figure 16 Example of a neighbourhood store in an older residential area.

Figure 15 Shopping centre parking lots provide opportunities for a range of uses; in this case, housing.

4.1.3 Neighbourhood Centre

Concept

Provide a full range of services to all members of the community in a neighbourhood centre. It might be regarded as an extension of today's community centre concept. The community centre, however, tends to focus on recreation and on those activities appealing to families or young singles. In the neighbourhood centre the range of services would be geared to the needs of residents in a specific neighbourhood and where there are a large number of seniors the orientation would be toward meeting their needs. Figure 17 indicates the type of service mix which could be made available in a seniors-oriented neighbourhood centre.

Rationale

The purpose of the neighbourhood centre would be to provide a centralized neighbourhood location for social and health service delivery, as well as other activities. The ideal location would be one readily accessible by seniors from all parts of the neighbourhood on foot (about 200 metres).* Since this is not practical, some form of transit service would be required to bring seniors from more distant locations to the centre. The centre's services would attempt to meet the needs of a heterogeneous community, and would offer services which, for example, would be aimed at keeping seniors independent.

Implementation

One of the most logical opportunities for the creation of a neighbourhood centre would be the local elementary school. At present many schools are being closed. They tend to be single function facilities. If schools could be adapted for broader use by all residents of the neighbourhood, these costly public facilities would have an extended life span. The centres could be operated by the municipality with various agencies, businesses or non-profit groups leasing space and/or making necessary improvements. The rationale behind such expenditures might be that money would be invested in the neighbourhood centre as a means of centralizing services and perhaps eliminating certain home care programs and costs.

There are other possibilities for the creation of a neighbourhood centre. Several housing units could be converted into a neighbourhood centre, particularly where the units may be close to other facilities, such as a park or library. A shopping centre might also be a potential site, and the inclusion of a neighbourhood centre within the complex might present special marketing opportunities to the shopping centre owner/manager. An existing recreation centre also could be adapted for wider neighbourhood use.

Figure 17 This diagram illustrates the range of services which could be provided at a neighbourhood centre.

4.1.4 Housing Mix and Flexibility

Concept

Provide a wide range of housing types and tenure for seniors within the neighbourhood context. The possibilities, with respect to housing, are numerous and Figure 18 identifies some of the possibilities that exist.

Rationale

Choice is an important aspect of the housing issue. At different stages in our life-cycle people have different needs for housing in terms of space, cost and so on. To encourage seniors to remain on their own for as long as possible a broader range of housing is needed. In most communities the biggest deficiency occurs

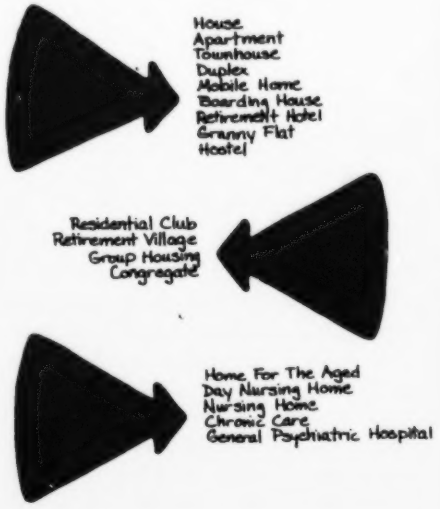


Figure 18 Seniors need a wide range of housing choice.

in the area of semi-independent living. This is where seniors share with others the cost of required supports, including nursing care, housekeeping, and meal preparation.

The ability to remain in a familiar neighbourhood is also important and in most cases this choice is not available to seniors if they are seeking a different type of accommodation from their present home. Therefore, a variety of housing within the neighbourhood would enable seniors to move from one level of care to another without feeling uprooted. It also discourages the creation of seniors' "ghettos".

* J.W. Wilson, "Assessing the Walking Environment of the Elderly" *Plan Canada*, 21:4, January, 1982.

Figure 19 Warehouses could be converted into seniors housing.

Implementation

New housing opportunities can be provided for seniors in a variety of different ways. Rehabilitation/conversion of existing housing stock (e.g. from single-family dwellings to multi-unit dwellings) or under-utilized commercial or industrial buildings is one of the more common ways this is being done now and could be done in the future (Figure 19). Housing could also be provided on school sites and/or in conjunction with a neighbourhood centre. In newly developing areas, housing stock flexibility could be encouraged with the use of a housing concept which allows for a part of a house to be used as a separate apartment. This space could be incorporated into the main dwelling unit when it is no longer needed.

Municipalities might also re-examine minimum floor area standards for single family dwellings to accommodate the small, and often one-person, seniors' household.

In the health field, integrated housing (Figure 12) facilities are another means of meeting the diverse needs of seniors by providing in one complex a range of housing from self-contained apartments to chronic care.

Retirement communities also have a role to play for seniors. Generally, they have been built in rural areas, but in the future perhaps an urban setting might be appropriate – a "new town in town" approach.

All of the above options could be developed by the private sector or, perhaps, by a private/public sector collaborative effort.

4.2 Transportation

Concept

Ensure seniors have access to a variety of modes of transportation including the automobile, fixed route public transit, special transit, walking and cycling.

Rationale

Mobility is an essential aspect of independence. If more seniors are going to be encouraged to remain in their own homes for a much longer period, then their transportation needs have to be considered in light of gradually diminishing physical abilities and financial resources.

A variety of transportation modes accessible to seniors, both financially and physically, would meet a range of seniors needs from walking to the corner store to travelling to the doctor's.

Implementation

Organizational innovation will be the major area for change in the transportation field. This might, for instance, include seniors-operated car rental fleets. Organizational and service-related innovations will be easier to put into practice than the larger-scale technological changes that require major capital expenditures. They may be carried out by the public sector or by the private sector.

The removal of barriers in the pedestrian environment is another important aspect of mobility for seniors. For instance, well-lit, well-marked and properly placed crossings over major roadways would help prevent accidents by providing a direct route and sufficient time for seniors to cross a street.

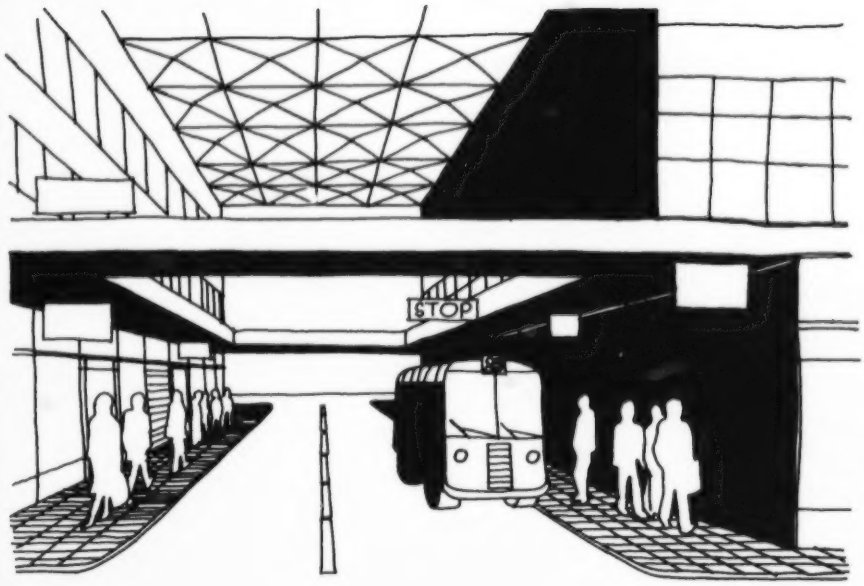


Figure 20 Special transit will be an important factor in seniors' mobility.

Of special importance for community planners, however, is the fact that the co-ordination and integration of transit planning and design with land use and building planning and design is necessary in order to ensure good physical and psychological accessibility for seniors between transit facilities and the buildings and activities to which seniors are likely to travel (Figure 20).

4.3 Urban Design Considerations

Various concepts relating to physical design can be extracted from the planning ideas presented in the previous sections. Below, five different elements of urban design are examined that may offer creative ways to improve the physical/social environment for seniors (and others):

- **connected/converted buildings;**
- **common land;**
- **urban corners;**
- **therapeutic parks; and**
- **the pedestrian environment.**

4.3.1 Connected/Converted Buildings

Concept

Recycle run-down and abandoned buildings for use by seniors, including residential, commercial or industrial properties. Buildings can be combined and connected in many ways to offer a variety of lifestyles, uses and spaces. Gardens, work spaces and other "outdoor rooms" can be incorporated into the scheme by linking buildings.

Similarly, gallerias or internal walkways can be created which can be used in both residential or commercial schemes and which would offer protected pedestrian space for seniors. The connected buildings can be used for private and group housing, neighbourhood centres, health centres, etc. Figure 21 illustrates this idea.

Figure 21 Buildings can be connected to enhance accessibility to services.

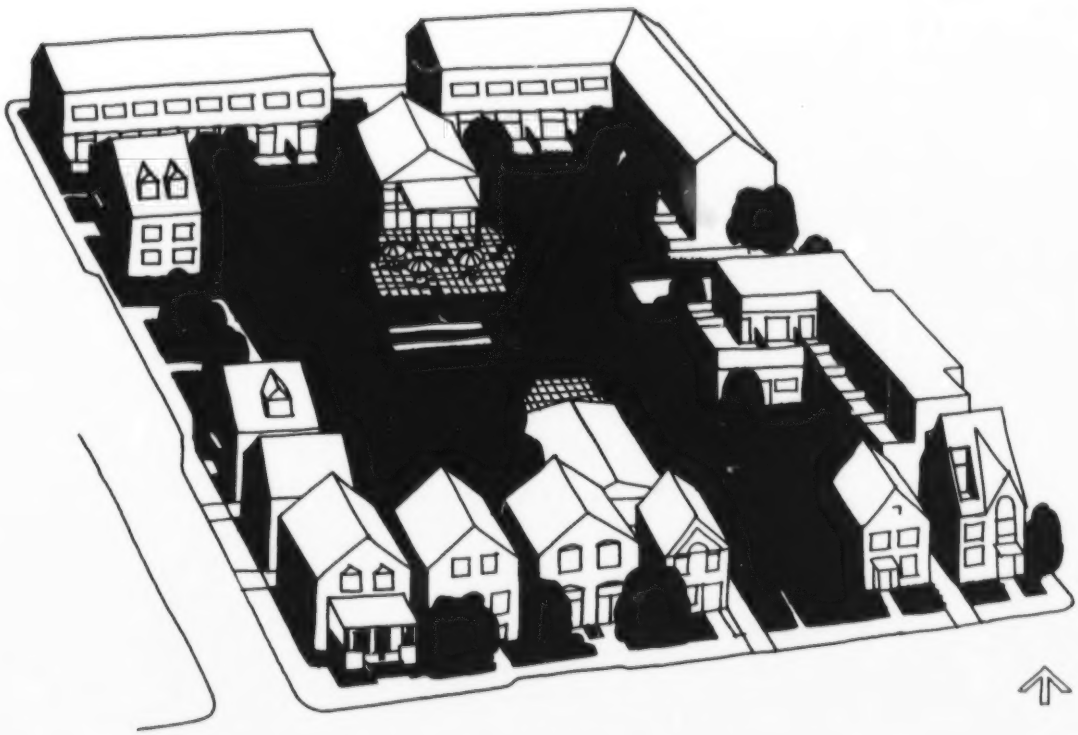


Figure 22 Common land can provide space for many beneficial uses by seniors.

Rationale

Land costs are very high, as are building costs. In many cases, though, it is less expensive to reuse an existing building than to develop a new one. The seniors' market is traditionally more limited financially than that for other groups. The most likely candidates for building adaptation can probably be found in the areas of town where building and land costs are lower.

By connecting buildings, small senior communities can be formed within neighbourhoods which enable more efficient provision of support services.

Implementation

Conversion and connection of buildings can be carried out both by the private and public sectors. Buildings can be connected with arcades, outdoor rooms and courtyards. They could be enlarged and improved with glass domes or skylights. Two buildings could be attached by a third building. However, in order to legally join buildings, they would have to meet requirements of the Building Code. There might also be zoning standards concerning setbacks, increased floor area, etc. which would have to be investigated.

Various types of buildings would be appropriate for conversion for seniors. One story bungalows would suit a certain group, perhaps those who are accustomed to living in detached houses, but who can no longer cope with stairs and property requiring maintenance. Medium-rise buildings with elevators would also be suitable for conversion. Office buildings, hotels, hostels and university and other residences could also be considered because they would lend themselves to smaller units (generally seniors require less space than other age groups).

4.3.2 Common Land

Concept

Create common land in housing developments for seniors and others. This would necessitate the siting and design of buildings to promote spontaneous contacts, surveillance and even climate mitigation. This means that south facing courtyard spaces could be planned, with front porches and balconies facing a common open space area. These spaces could, perhaps, feed into a larger system. At the same time, however, individual privacy should also be preserved (Figure 22).

Rationale

Probably the largest drawback of the single family dwelling compared to high rise apartments for seniors is isolation. Common land created in higher density projects can make it possible for people to feel comfortable both outside their buildings and in their private territory. It would allow seniors to feel connected to a larger system. Common land could also act as a meeting place for people. Thus, with well-planned and designed housing schemes, seniors could experience independent living

with the protection and the potential for social interaction, if desired, and without the responsibility for maintenance and upkeep.

Implementation

Since townhouses are easiest to design for clustering and the creation of interesting common lands, this type of building, in combination with medium-rise apartments, would provide excellent accommodation for seniors. The outdoor private and public spaces do not have to be large, but should improve upon empty and poorly used open space offered in many housing schemes.*

4.3.3 Urban Corners

Concept

Create comfortable open space in a public arena which offers seating and the opportunity for socialization, and which contributes to the overall landscaping plan of an area. See Figure 23. The concept of an urban corner is related to the principle of enhancing the pedestrian environment and to the provision of common space.

Urban corners would be appropriate in both urban and suburban settings. In fact, if appropriately modified, they can "urbanize" a suburban area by helping to create a "sense of place" – a public gathering place. The space should be proportionate to the activity level of the immediate surroundings as well as to the architectural scale of adjacent buildings.

Rationale

Urban sidewalks can be difficult to manage for seniors during various times of the year. They are often too narrow for the variety of demands placed upon them (i.e. to accommodate crowds, snow banks, benches, etc.). This limitation discourages use, especially by frail seniors. The streetscape can be enhanced by urban corners.

* Ministry of Housing. *Site Planning Guidelines for Medium Density Housing.* January, 1980.

These small parkettes or urban plazas located at special intersections can accommodate pedestrians, crowds, street furniture, snow and like. Urban corners should be located near shopping, people destinations, or busy areas to contribute to a sense of security and to make them ideal for seniors (and others). This sense of security may not be possible to achieve in the more traditional and isolated urban parks.

Implementation

Urban corners would likely be a municipal venture, although they could be "grassroots" projects initiated by interested neighbourhood groups for existing development or planned and developed by private developers into new projects.

Urban corners might be developed on municipal right-of-ways, on leased land or on land purchased specifically for this public function. In other instances they could be created by a site plan agreement between a developer and a municipality.

Figure 23 Urban corners provide room for people, plants, benches, activities and so forth.

4.3.4 Therapeutic Park

Concept

Design open space to promote the physical and mental stimulation of its users. Each of its elements serves a useful function for each particular user group. For example, walking paths would form a loop (facilitating a return trip) to promote fitness. Furniture could be suitably designed for seniors and the disabled. The environment would be barrier-free. The following park illustration (Figure 24) shows how one park could be designed for seniors.

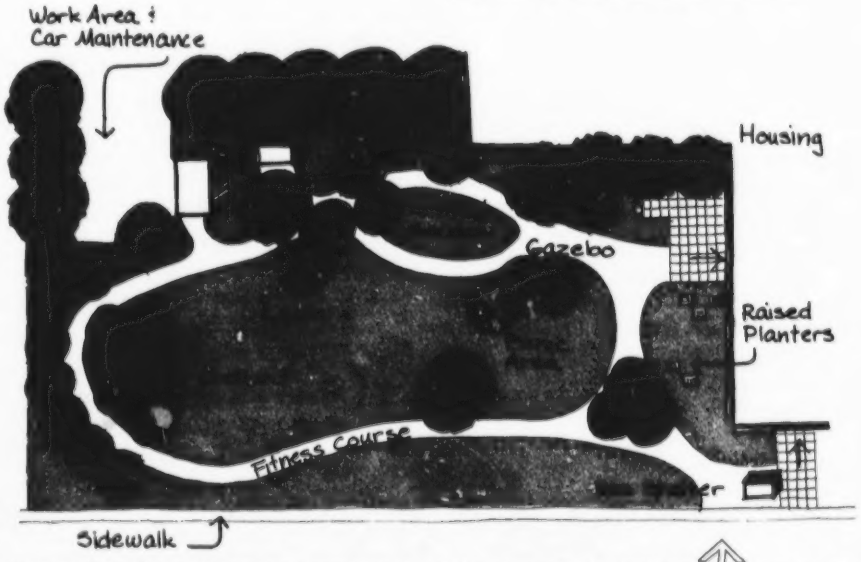


Figure 24 In a therapeutic park each of the elements is designed to promote the physical and well-being of its uses.

Rationale

Neighbourhood open spaces are frequently inaccessible to, or uninviting for seniors because of steep inclines, limited personal security, lack of shelter and even lack of order. Often spaces around exclusively seniors' buildings or facilities are also not developed in a useful or imaginative way. The concept of a therapeutic park recognizes the contribution a well thought-out open space can make to the mental, emotional and physical fitness of the seniors' population, as well as the rest of the population.

Implementation

Existing neighbourhood parks could be partially or totally adapted for therapeutic purposes, or new spaces could be created adjacent to nursing homes, homes for the aged, seniors' housing or a neighbourhood centre. Seniors themselves could become involved in selecting the key elements and perhaps even making displays or furniture.

The following elements are some of the items which could be included in the design of a therapeutic park:

- ▶ fitness course for walking or jogging;

- garden space with raised planters for the disabled (including those in wheelchairs);
- sunny protected outdoor seating areas (south facing);
- artifact garden with mementos from the past to stimulate memories and thoughts;
- a work area with work spaces for people who have moved out of their homes and need a work area for car maintenance, carpentry, etc.; and
- a pet area where seniors could care for animals (for the purpose of emotional and physical stimulation).

4.3.5 Pedestrian Environment

Concept

Provide the safest, most pleasant and exciting pedestrian environment possible for seniors (and others) including both active and passive spaces used by people. This objective can be accomplished through the appropriate physical design of trip destination points, improved pedestrian amenities and accessibility, and through attention to land-use relationships (Figure 25).

Rationale

The benefits gained by a senior from an outside walking trip can be significant and, if medically able, seniors should be encouraged to make various types of trips (shopping, visiting, etc.). However, seniors are often frail, and conventional streets and sidewalks are frequently unprotected and difficult for them to manage, especially during the winter months.

Implementation

Changes in the pedestrian environment could be accomplished through both public and private ventures. The public sector could ensure the best possible pedestrian circulation routes, parks and people spaces would be identified. The private sector could allow short-cuts through private developments. In either case, attention should be paid to the following (see Figure 26):

- paths should follow the sunniest, most sheltered routes;
- paths should be wide enough for two people to walk abreast unobstructed by curbs, edges or uneven surfaces;
- paths should be well lit, with even slopes because changes in grade are hard for seniors to perceive; slopes become a factor at grades of five percent and become a deterrent at about ten percent regardless of length of path.* Wheelchair access ramps presently are obstacles for some seniors during winter months. However, with increased exposure to ramps, seniors may become more accustomed to the grade changes and better able to negotiate them. Any unusual circulation impediments should be brightly painted (curbs, bumps, etc.);
- a 200 metre walking distance measure should be considered at all times. This means that if a distance between two destinations is considerably more than 200 metres, shelters should be provided for warming-up and resting;
- there should be guard-rails at busy intersections where seniors (especially confused seniors) might run into a conflict with traffic. Intersections close to homes for the aged would be an example of such a case;
- when routing walkways consideration should be given to the setting. Interesting routes where people may be observed or where there are activities to watch would be preferred and should be used;

Source: City of Toronto, 1981, (Taken From Facility Location 'Standards' of Niebanck and Pope, Modified Graphic.)

Figure 25 This diagram illustrates the distance from various services which should be considered when planning for seniors housing.

* J.W. Wilson, "Assessing the Walking Environment of the Elderly" *Plan Canada.* 21:4, January, 1982.

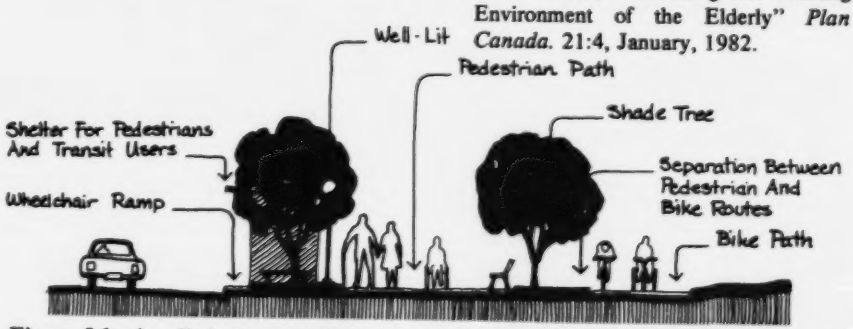


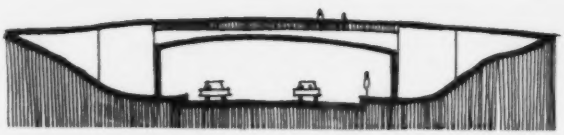
Figure 26 A well-designed pedestrian environment for seniors would be barrier-free, well-lit, separated from bicycles and autos, and have protection from inclement weather.

- mid-block short-cuts through property and buildings should be allowed to achieve the shortest possible route;
- there should be a clear separation of pedestrians, vehicles and bicycles, although they could occur in close proximity. Bicycles and skateboards, in particular, should be prohibited from those pedestrian paths frequented by seniors (Figure 15);
- to facilitate the separation between the pedestrian and other types of traffic, cross-walks, pedestrian-activated traffic signals and pedestrian bridges/tunnels should be sensitively planned;
- ideally, a pedestrian crossing over an arterial or busy road should be at grade, with the roadway depressed (Figure 27). However, if this is not possible because of cost or other factors, then an overhead bridge could be considered. A gradual transition to the grade change could be achieved through terracing;
- subterranean tunnels would be the last choice because they could be psychologically frightening and potentially dangerous. However, if tunnels are planned with a wide-open, gradual grade change (done in conjunction with a slightly elevated roadway), they can work successfully. Well-lighted and not too steep steps used for the bridge or tunnel can be therapeutic for the active elderly, but ramps should always be provided as an alternative.
- on-grade crossings on local roads should have signals timed for slower elderly movement. Islands would be desirable on the wider streets to ensure a safety zone for the pedestrians who could not make it across the street in time.
- there should be coordination between transit routes and stops, and the pedestrian path. The path should be well-located with respect to the origins and destinations of seniors (e.g. close to elderly housing complexes);
- transit stops as discussed earlier, should be physically integrated into buildings and/or activity centres, where possible, to minimize access and egress walk times and improve the comfort and security of seniors.

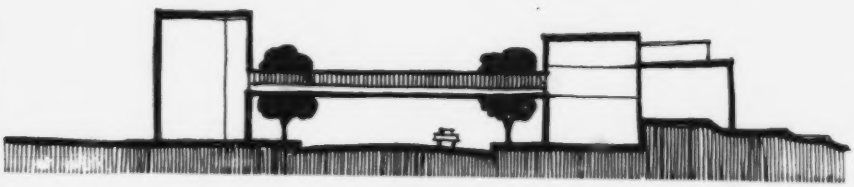
This concludes the chapter on the community planning response to an aging society. The ideas are presented here to encourage planners and others working at the municipal level to develop their own variations on these suggestions or, indeed, their own solutions appropriate to conditions in their community. The overall aim has been to make planners more aware of the demographic changes occurring throughout society and to illustrate ways in which planners might respond.

In the Appendix, a case study is presented to show, in a specific situation, land use, urban design and transportation concepts can be used by community planners to accommodate the numbers, needs and issues related to an aging population.

Mid-Crossing Island



Roadbed Lowered



Pedestrian Bridge Using Buildings

Figure 27 There are various solutions which would enable seniors to cross busy arterial roadways safely.

Appendix: Case Study

Introduction

Few if any studies have been done or plans prepared directly related to the future impact of aging in urban areas. This is the case at the municipal level in Ontario. In order to illustrate how the planning concepts discussed in Chapter 4 might be applied, a Southern Ontario community was selected for study. A Northern community was not chosen for examination because, generally speaking, they would have younger populations and the nature of their economic base may cause them to experience the impacts of aging somewhat differently, such as an out-migration of seniors.

Demographic data and background information were collected for the neighbourhood and the larger community, including information on seniors' organizations, and health and other facilities. A detailed analysis of the neighbourhood was carried out.

The summary below examines what changes might be required to adapt this conventional suburban residential neighbourhood to meet seniors' needs and to explore development opportunities on an adjacent shopping centre site and on nearby undeveloped parcels.

The Neighbourhood

The case study neighbourhood is a newly developing suburban area. The existing residential development has been constructed since 1975 and is predominantly single family housing with some semi-detached units and row houses. Medium and high density housing is zoned for development on the remaining undeveloped land parcels. Phase 1 of a large regional shopping centre was recently completed. A community recreational centre is proposed adjacent to the shopping centre on its southern boundary.

About 94 percent of the households were owner-occupied in 1976. The majority of households are young families and this is reflected in a large average household size (3.7 persons). Most people are young as well; 85 percent are under the age of 45 years and only two percent are over the age of 65 years. If, however, many residents choose to remain in their own homes as they grow older, the percentage of seniors may jump to about 16 percent by 2001 and to 27 percent by 2031.

Figure 28 A typical suburban residential street.

Problems and Opportunities

The road layout of the neighbourhood follows a conventional curvilinear subdivision pattern (Figure 28). There is one significant natural barrier, a creek, which separates the industrial area from the residential part of the neighbourhood. Major arterial roadways also act as formidable barriers to pedestrians wishing to leave the neighbourhood on foot or wanting future access to the shopping centre or the community centre.

The shopping centre and the proposed community recreational facility, to be built just south of the shopping centre, are physically separated from the surrounding neighbourhood (see Map 1). There are no proposed pedestrian or vehicular links to the low density neighbourhood and the shopping centre is oriented to the northwest to capture the regional market. This segregation of uses is further emphasized by the location of several neighbourhood convenience stores at the opposite side of the neighbourhood (Figure 29). There are, as a result, large pockets of housing which have no convenience stores or community services easily accessible on foot.

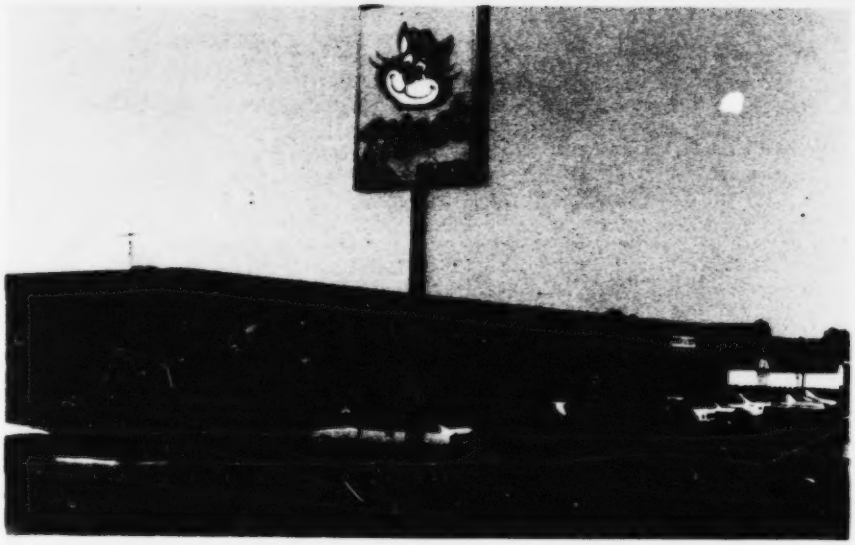
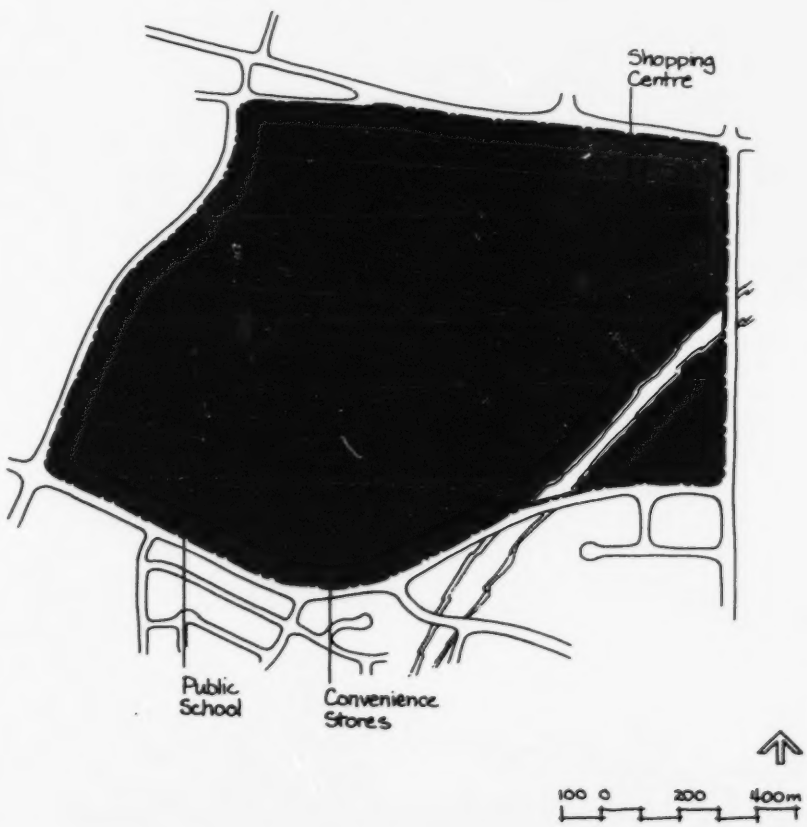


Figure 29 A group of neighbourhood convenience stores.

There are few other land uses in the neighbourhood: an elementary separate school, two proposed parks and a proposed open space system. There are no churches within the area. The existing or planned facilities are strictly family-oriented. With so few seniors there are no services or facilities geared specifically to their needs. The neighbourhood is auto-oriented; however, the transit authority does operate a bus route in the neighbourhood. The service is hourly and operates from 7 a.m. to 5:45 p.m. There is no night-time service and there is also no direct link with the

Map 1 Existing Land Use and Facilities



downtown. From a transportation viewpoint, residents who do not own a vehicle or who do not have regular access to an automobile are physically isolated in the neighbourhood. This isolation is not as severe as it would be in a rural area; however, even in this small city of 50,000 persons, downtown is twenty minutes away by car. Almost all seniors services are provided in the core area.

Although presently occupied by families, the neighbourhood will likely experience the dramatic effects of an aging population in the future. Assessing the neighbourhood from that viewpoint, several problems appear.

First of all, the low density development pattern is oriented to transportation by private car, not by foot or by transit. The cost of effectively serving this area with transit would be high if the density is not increased. The curvilinear street pattern, combined with no mixture of land uses, also works against the pedestrian, particularly anyone with disabilities. The layout creates long distances between home and activity areas. Sidewalks are also not provided, further discouraging the pedestrian, especially during the winter months.

Secondly, there are no social or health services provided in the neighbourhood. In fact, most services are only available several kilometres away. The nearest hospital is in the downtown area. Better transportation to these facilities, as well as more local services, will be needed.

Thirdly, the housing stock is narrowly focussed on the family unit. More variety in housing types, including alternatives which have partial care options, should be permitted. Better distribution of a variety of housing types throughout the neighbourhood would encourage the provision of better distributed services.

Lastly, the effective separation of the shopping centre from the rest of the surrounding area leaves this neighbourhood without a functional focal point.

Planning Proposals

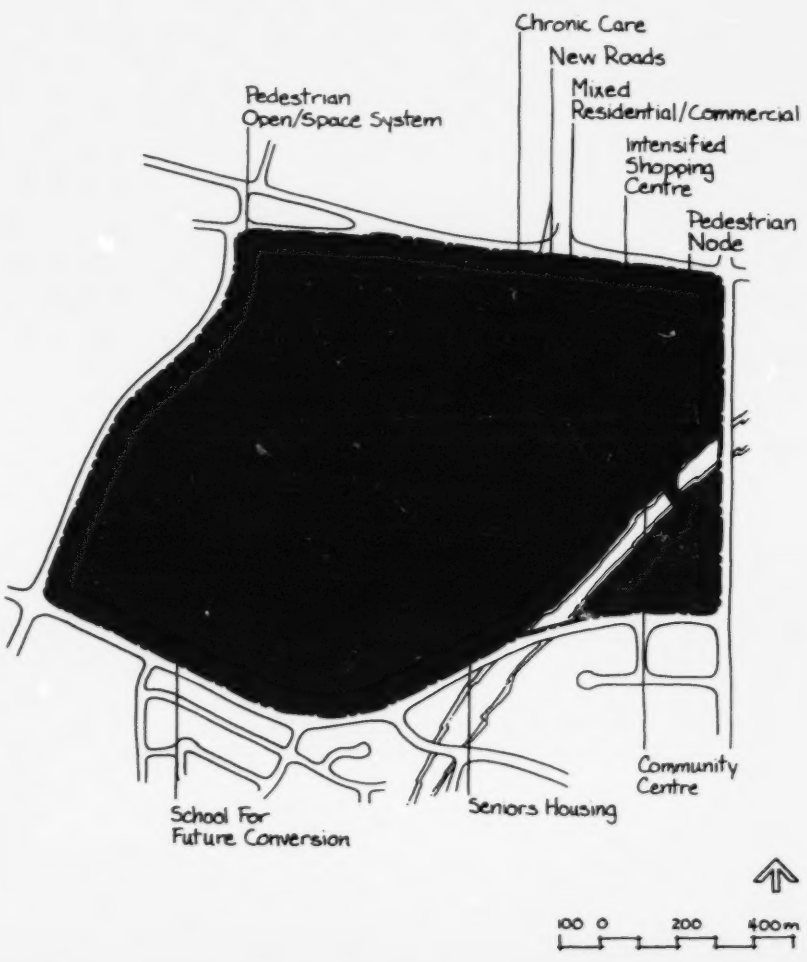
The planning proposals concentrate on making this area a "neighbourhood" which can meet the immediate needs of its residents over time, instead of a suburban subdivision that happens to have a regional shopping centre on its border (Map 2).

Intensify the use of the shopping centre and re-orient its role in the community

Shopping centres have some natural advantages for seniors since they provide a variety of shops in one enclosed, protected space. If properly developed and utilized, they can become much more important as activity centres for seniors (and others).

The shopping centre presently turns its back on the neighbouring residential area. The surrounding parking lots emphasize this isolation further. The role of the shopping centre could be broadened so that it becomes a significant focal point for the neighbourhood in the future. To achieve this goal, there could be an intensification and mixing of land uses on the site. For example, municipal agencies, medical services, recreational facilities and possibly a daycare centre could be added thereby expanding its role to more of a town centre. The parking areas to the north could be decked and office buildings constructed above. On the southern face, seniors apartment buildings could be built to ensure seniors would be close to the centre and to assist in making the transition between the centre and the residential

Map 2
Planning Concepts



Open Space
Low Density Residential
Medium Density Residential
Institutional
Commercial
Industry

neighbourhood more gradual. To strengthen its link to the residential areas, there could be vehicular and pedestrian access from the western side of the site. Convenience stores (e.g. drugstore, shoe repair) with residences above could line the pedestrian route into the main complex. This smaller scale development would help make the transition between the local neighbourhood and the larger scale shopping centre.

The proposed community centre could have shared open space with the shopping centre, probably a plaza which could make use of the sheltered southern exposure of the centre. There could also be a pedestrian link, across the creek, to the industrial area so that workers during the day would have better access to the shopping centre.

Increase the range of housing opportunities

The major potential for increasing the types of housing available for seniors and others in the neighbourhood lies on the two large undeveloped parcels of land: one in the south-west corner of the neighbourhood and the other in the north-east next to the shopping centre. Both parcels could provide a variety of medium to high density housing ranging from street townhouses to apartment buildings. Although seniors could probably live in both areas, the parcel adjacent to the shopping centre might be the most attractice to seniors.

New housing development could include:

- medium density seniors housing constructed on the shopping centre site;
- a chronic care hospital situated directly opposite the centre. Patients who would be able to move about would have good accessibility to the centre and it would also provide encouragement to friends and relatives to visit the facility;
- next to the chronic care hospital, seniors congregate or group housing, along with use of open space for a therapeutic park; and
- in the remainder of the neighbourhood, infilling in certain areas and in others, conversions of housing into two or more units to expand the choice of housing unit type.

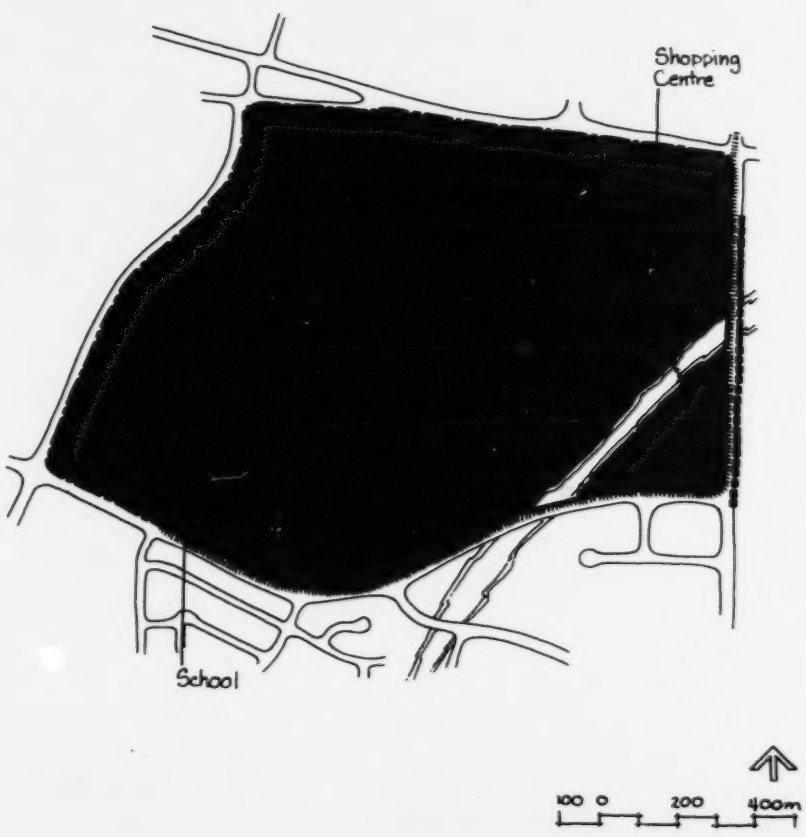
Improve personal mobility and access to services and facilities within and beyond the neighbourhood

A realignment of the current street system would not be possible. Increased residential densities where appropriate, however, would assist in making the neighbourhood more efficient to service by public transit. The most significant improvements could be made in developing a pedestrian network throughout the area and in allowing access to the shopping centre from the neighbourhood.

The major pedestrian system could be separated from roadways when practical, and could be well defined, brightly lit at night and sheltered from prevailing winds. Where the proposed pedestrian route connects with the transit route, shelters could be constructed so that they could be used by pedestrians, as well as transit riders.

The only proposed vehicular access to the shopping centre is from the east. Two additional access points could be opened up from the west. These new roadways, in addition to allowing more circulation between the neighbourhood and the shopping centre, could also enable the devel-

Map 3 Proposed Circulation Plan



opment of a neighbourhood transit service, probably a jitney-type of operation. Not only could the jitney serve people throughout the neighbourhood, but it could also feed riders into the conventional fixed route system, which runs downtown.

Provide services to support seniors and others in the neighbourhood

The multi-use shopping centre and community recreational centre could provide a range of services and programs for seniors, not presently available in the neighbourhood. They would, however, only be accessible on foot to a few older residents. The remaining seniors would depend upon the car or transit to bring them to the centres.

To enable residents to obtain basic food services and other household supplies within walking distance of their homes, small commercial facilities could be provided in the residential parts of the neighbourhood. These could supplement the few other convenience shops outside of the shopping centre.

The existing elementary school could become a neighbourhood centre, serving the southern portion of the area, when the age composition of the area changes and the need for a school diminishes. It would provide a central location for community support services for seniors, such as health counselling or meals. The regional centre adjacent to the shopping centre could continue to cater to the wider community, perhaps providing programming for seniors, but generally supplying services and programs needing a larger client population.

Summary

The overall concept has been to redevelop the shopping centre site and re-orient its use to provide a focus for seniors and for the community. The major undeveloped land parcels have been shown for medium density uses, considerably denser development than that now present in the built-up area and appealing to a broad spectrum of users. Vehicular and pedestrian access to the shopping centre site have been provided from the neighbourhood and the integration of uses has been improved by permitting the development of convenience retail stores, with housing above, to connect the main shopping centre complex with adjacent apartment buildings and a chronic care hospital. Corner stores, or small commercial nodes, have been permitted throughout the remainder of the area.

Personal movement in the neighbourhood has been improved in two ways. First of all, a sheltered pedestrian route (as part of the open space system) runs across the neighbourhood. Secondly, a community bus network, using small vans with a deviation route pattern, serves residents and connects them to the conventional bus system (serving the rest of the city) at the shopping centre.

The overall goal has been to intensify the activities in the neighbourhood, increase the number of people living there and thus provide a viable environment for future seniors who wish to remain relatively independent.

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